

Remarks

The claims in the application are 1-25.

Favorable consideration of the application as amended is respectfully requested.

Claim 2 has been amended to better describe the invention and to reflect the language recited in the specification at page 14, lines 12-15 of the translated specification filed on December 22, 2005. Accordingly no new matter has been added. In addition, claims 21-25 have been added to the application. Support for these claims can be found throughout the specification and in particular at pages 10-15 of the translated specification. Accordingly, no new matter has been added.

In the Office Action, Claim 2 has been rejected under 35 USC § 112, second paragraph as allegedly being indefinite for failing to particularly and distinctly claim the subject matter of the invention. By way of this amendment claim 2 has been amended to more distinctly claim the invention as described above. Accordingly, the Applicants respectfully request that the rejection under 35 USC § 112, second paragraph be reconsidered and withdrawn.

In the Office Action, Claims 1,2,4,5,9,10,12 and 14 have been rejected under 35 USC § 102(b) as being anticipated by Bilder et al. (US 5,534,289).

In making the rejection, the Examiner stated that Bilder et al. discloses a method for aiding in the early detection of cracks in a structure wherein the method provides a self-activating crack indication system visible to observers. The Examiner further states that the described method comprises applying a coating having a first color on the surface structure further comprising a second coating including a second color. (See Office Action

page 3, Para # 3).

The Applicants respectfully traverse the rejection. Prior to discussing the prior art rejection set forth in the Office Action, a brief description of the inventive portion of the present invention and its function is discussed below.

The present invention is specifically designed to overcome fading, oozing and washing away of the visualizing liquid once it bleeds to the outermost surface associated with crack detection systems currently available on the market. In order to overcome this potentially fatal flaw, the presently claimed invention comprises a second transparent coating layer having an outermost layer, flexible enough not to crack even upon cracking of the first coating layer. (See claim 1). Therefore, even if a crack develops in the surface of a metal or a concrete structure, the crack is unable to propagate to the outermost surface layer of the structure since the outermost layer is more flexible than the rest of the layers in the structure. Since the crack can not propagate to the outermost layer, the visualizing liquid flowing out of the capsules in the first coating layer of the present invention can not flow out to the exterior of the coating layer, but stays within the layer since the transparent second layer prevents oozing of the visualizing liquid to the exterior surface. Thus, the possibility of fading, and/or being washing away of the visualizing liquid once a crack occurs and the crack going undetected is removed.

Turning now to Bilder et al. The Applicants respectfully note that the Applicants have cited and discussed Bilder et al in the "Background Art" section of the present application. As stated in the application, although Bilder et al. uses a visualizing liquid to detect cracks, the visualizing liquid oozes out to the exterior surface of the coating layer along a crack that may develop in the structure. Once the liquid is observed the crack can

be examined and proper actions can be taken. However, Bilder et al fails to describe “a second coating layer being transparent and having an outermost layer flexible enough to be prevented from being cracked even upon cracking in the first coating layer a clear outer layer.” as recited in Claim 1 as amended.

In other words, once a crack occurs in the structure and the microcapsules release a visualizing liquid, the visualizing liquid oozes to the surface instead of being contained beneath a second transparent coating, as recited in the present claims. Therefore, the visualizing liquid can fade or wash away, leaving the cracks undetected. In stark contrast, as discussed above, the present invention solves this potentially fatal flaw associated with the coating for the inspection of a crack in a structure described in Bilder et al. by requiring a second transparent layer that still allows the crack to be visualized but protects the visualizing liquid released from the ruptured encapsulated particles from oozing to the exterior surface and fading or being washed away.

As is well settled, anticipation requires “identity of invention.” *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply*, 33 USPQ2d 1496, 1498 (Fed. Cir. 1995). Each and every element recited in a claim must be found in a single prior art reference and arranged as in the claim. *In re Marshall*, 198 USPQ 344, 346 (CCPA 1978); *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). There must be no differences between what is claimed and what is disclosed in the applied reference. *In re Kalm*, 154 USPQ 10, 12 (CCPA 1967); *Scripps v. Genentech Inc.*, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). “Moreover, it is incumbent upon the Examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference.” *Ex parte Levy*, 17 USPQ2d 1461, 1462 (BPAI 1990). The

Examiner is required to point to the disclosure in the reference “by page and line” upon which the claim allegedly reads. *Choing v. Roland*, 17 USPQ2d 1541, 1543 (BPAI 1990). “Anticipation of a claimed product cannot be predicated on mere conjecture as to the characteristics of a prior art product.” *Ex parte Standish*, 10 USPQ2d 1454, 1457 (BPAI 1989). That the claimed product “could” result from the process disclosed in the applied reference, is insufficient to support a conclusion that it will inherently result, and insufficient to support a conclusion that what is claimed is anticipated. *Glaxo Inc. v. Novopharm Ltd.*, 34 USPQ2d 1565, (Fed. Cir. 1995).

As stated above, the Examiner has failed to show where Bilder et al. teaches each and every element as arranged in the claims of the present invention. In particular, the Examiner has failed to show where a coating for the inspection of a crack in a structure comprises a second transparent coating layer having an outermost layer flexible enough to be prevented from being cracked even upon cracking in the first coating layer as recited in the claims as amended can be found.

As stated in the rejection at page 3, lines 8-13, the “coating of a first color on the surface of the structure, said coating including microcapsules containing a second color and said microcapsules being subject to breakage upon occurrence of a second coating of a crack in said structure and applying a second coating of a second color (column 3, lines 1-15).” (Emphasis added). As can be seen from the section quoted by the Examiner from Bilder et al., in making the rejection, the second coating provides a second color and is not transparent. Therefore, Bilder et al. does not teach or suggest a coating for the inspection of a crack in a structure containing a second transparent coating according to claim 1. In view of the foregoing, the Applicants respectfully request that the rejection of claims

1,2,4,5,9,10,12 and 14 under 35 USC § 102(b) be reconsidered and withdrawn.

In the Office Action, Claims 1,2, 4-6, 9, 10, 12, 14-16, 18 and 20 have been rejected under 35 USC 102(b) as being anticipated by Crites et al. (US 3,803,485). Crites et al describes a multi-layered coating with the first layer being electrically nonconductive and the second layer being conductive. As with Bilder et al., Crites fails to teach a coating for the inspection of a crack in a structure having a second transparent layer as described above and claimed in the present invention, nor has the Examiner showed where such a description of this layer can be found in Crites et al. For this reason, as in the Bilder et al. rejection discussed above, the Applicants respectfully request that the rejection of Claims 1,2, 4-6, 9, 10, 12, 14-16, 18 and 20 under 35 USC 102(b) be reconsidered and withdrawn.

In the Office Action, claims 1-5, 7-14 and 16-20 have been rejected under 35 USC § 103(a) as allegedly being unpatentable over Bilder et al in view of Otsuka (US 4,624,709). In making the rejection the Examiner relied on Bilder et al. for its teachings as described in the 102(b) rejection above and stated that Bilder et al. failed to teach that the microcapsules contain nigrosine as the dye. To correct this acknowledged factual deficiency, the Examiner relied on Otsuka. A review of Otsuka reveals that Otsuka is directed only to substituted nigrosine dyes and is silent on the use of these dyes in a coating for the inspection of fatigue cracks in a structure. Moreover, Otsuka does not provide any disclosure directed to a coating for the inspection of a crack in a structure having a second transparent layer as claimed in the present invention. Therefore, Otsuka fails to correct the factual deficiency described above in Bilder et al.

Since Bilder et al. does not teach or suggest a coating for the inspection of a crack in a structure having a second transparent layer as claimed in the present invention and

Otsuka does not correct this factual deficiency, the Applicants respectfully request that the rejection of claims 1-5, 7-14 under 35 USC § 103(a) be reconsidered and withdrawn.

Accordingly, in view of the foregoing remarks and amendments, the present application is believed to be in condition for allowance, which action is earnestly solicited. Early favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Leo G. Lenna', with a stylized, flowing script.

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